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| 10/646,102 | 08/22/2003 | Michael Bryndzia | 905P181A | 8415 |
| 44564 | 7590 | 12/16/2004 | EXAMINER | |
| BOND, SCHOENECK & KING, PLLC 10 BROWN ROAD, SUITE 201 ITHACA, NY 14850-1248 | | | DOLE, TIMOTHY J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2858 | |

DATE MAILED: 12/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/646,102

Applicant(s)

BRYNDZIA ET AL.

Examiner

Timothy J. Dole

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed, after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21, 23-27 and 33-40 is/are rejected.
- 7) ☒ Claim(s) 22 and 28-32 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/12/03</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Objections

1. Claim 24 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 13. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

The numbering of claims is not in accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 36-41 have been renumbered 35-40.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-10, 19-21, 25, 27 and 33-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Brownell.

Referring to claim 1, Brownell discloses an electric circuit test device for testing an electric circuit, the test device being insertable in a receptacle, the receptacle including electrical terminals coupled to the electrical circuit, the device comprising: a housing (fig. 15 (118)) characterized by a longitudinal axis; a plug blade (fig. 16 (146)) assembly disposed within the housing and configured to mate with the electrical terminals (fig. 16), electrical continuity being established between the plug blade assembly and the electric circuit (column 15, lines 51-54); a fault detection circuit (fig. 14) coupled to the plug blade assembly and disposed within the housing, the fault detection circuit being configured to detect a circuit status condition in the electrical circuit (column 6, lines 42-43); and at least one circuit status indicator assembly (fig. 15) coupled to the fault detection circuit and normal thereto, the at least one circuit status indicator assembly including a plurality of semiconductor light indicators (fig. 15 (124), (126) and (128)) connected substantially normal to the at least one circuit status indicator assembly, the plurality of semiconductor light indicators being configured to emit a code corresponding to the circuit status condition in a direction normal to the longitudinal axis with a viewing angle less than approximately 30° (column 14, lines 54-57). It should be noted that since the semiconductor light indicators of Brownell are LED's, their viewing angle would be less than 30° .

Referring to claim 2, Brownell discloses the device as claimed wherein the fault detection circuit is configured to detect the circuit status condition in a single-phase grounded neutral electric circuit (column 11, lines 55-58).

Referring to claim 3, Brownell discloses the device as claimed wherein the circuit status condition includes an open hot wire status condition (column 12, line 24).

Referring to claim 4, Brownell discloses the device as claimed wherein the circuit status condition includes an open neutral wire status condition (column 12, lines 15-16).

Referring to claim 5, Brownell discloses the device as claimed wherein the circuit status condition includes an open ground status condition (column 12, lines 17-18).

Referring to claim 6, Brownell discloses the device as claimed wherein the circuit status condition includes a hot/neutral reversed polarity status condition (column 12, lines 19-20).

Referring to claim 7, Brownell discloses the device as claimed wherein the circuit status condition includes a properly wired and grounded status condition (column 12, line 14).

Referring to claim 8, Brownell discloses the device as claimed wherein the fault detection circuit includes a mis-wire protection circuit portion, the mis-wire protection circuit portion prevents component destruction during a mis-wire condition, such that the device is operable after the mis-wire condition (column 12, lines 7-11).

Referring to claim 9, Brownell discloses the device as claimed wherein the mis-wire protection circuit portion includes at least one diode component inhibiting reverse biased current (column 12, lines 7-11).

Referring to claim 10, Brownell discloses the device as claimed wherein the single phase grounded neutral electric circuit supports 120 VAC, 277 VAC, or 347 VAC (fig. 12 see box on lower left-hand side).

Referring to claim 19, Brownell discloses the device as claimed wherein the code emitted by the at least one circuit status indicator assembly is a Boolean code (fig. 15).

Referring to claim 20, Brownell discloses the device as claimed wherein the plurality of semiconductor light indicators further comprises a plurality of LED elements (fig. 15 (124), (126) and (128)) coupled to the fault detection circuit by way of a circuit board standoff element, the plurality of LED elements being configured to display the code (column 14, lines 54-57).

Referring to claim 21, Brownell discloses the device as claimed wherein the plurality of LED elements comprise LEDS of a different color (column 9, lines 36-37).

Referring to claim 25, Brownell discloses an electric circuit test device for testing an electric circuit, the test device comprising: a housing (fig. 9 (48)) characterized by a longitudinal axis; a connector cable (fig. 9) coupled to the electric circuit and to the housing (column 10, line 66 – column 11, line 2); electrical terminals (fig. 9 (50)) coupled to the connector cable, electrical continuity being established between the electrical terminals and the electric circuit (column 11, lines 1-2); a fault detection circuit (fig. 2) coupled to the electrical terminals (fig. 2) and disposed within the housing (column 10, lines 66-67), the fault detection circuit being configured to detect a circuit status condition in the electrical circuit and connector cable (column 7, line 55 – column 8, line 5); and at least one circuit status indicator assembly (fig. 12) coupled to the fault detection circuit and normal thereto, the at least one circuit status indicator assembly including a plurality of semiconductor light indicators (fig. 2 (L1-L3)) connected substantially normal to the at least one circuit status indicator assembly, the plurality of

semiconductor light indicators being configured to emit a code corresponding to the circuit status condition in a direction normal to the longitudinal axis with a viewing angle less than approximately 30° (column 7, line 55 – column 8, line 5). It should be noted that since the semiconductor light indicators of Brownell are LED's, their viewing angle would be less than 30° .

Referring to claim 27, Brownell discloses the device as claimed wherein the electric circuit includes a receptacle (column 15, lines 51-59) with second electrical terminals coupled to the electric circuit, further comprising: a second housing (fig. 15 (118)) characterized by a longitudinal axis; a plug blade (fig. 16 (146)) assembly disposed within the housing and configured to mate with the second electrical terminals (fig. 16), electrical continuity being established between the plug blade assembly and the second electrical terminals (column 15, lines 51-54); a second fault detection circuit (fig. 14) coupled to the plug blade assembly and disposed within the housing, the fault detection circuit being configured to detect a circuit status condition in the electrical circuit (column 6, lines 42-43); and at least one circuit status indicator assembly (fig. 15) coupled to the fault detection circuit and normal thereto, the at least one circuit status indicator assembly including a plurality of semiconductor light indicators (fig. 15 (124), (126) and (128)) connected substantially normal to the at least one circuit status indicator assembly, the plurality of semiconductor light indicators being configured to emit a code corresponding to the circuit status condition in a direction normal to the longitudinal axis with a viewing angle less than approximately 30° (column 14, lines 54-57). It should be

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noted that since the semiconductor light indicators of Brownell are LED's, their viewing angle would be less than 30°.

Referring to claims 33 and 36, Brownell discloses the device as claimed wherein the circuit status condition includes an open hot wire condition (column 7, lines 57-58).

Referring to claim 34, Brownell discloses the device as claimed wherein the circuit status condition includes an open ground status condition (column 7, lines 59-60).

Referring to claim 35, Brownell discloses the device as claimed wherein the circuit status condition includes a hot and ground reversed status condition (column 8, lines 2-3).

Referring to claim 37, Brownell discloses the device as claimed wherein the circuit status condition includes a properly wired and grounded status condition (column 7, line 64).

Referring to claim 38, Brownell discloses the device as claimed wherein the fault detection circuit is configured to detect the circuit status condition in a single-phase grounded neutral electric circuit (column 7, lines 30-33).

Referring to claim 39, Brownell discloses the device as claimed wherein the single phase grounded neutral electric circuit supports 120 VAC, 277 VAC, or 347 VAC (fig. 12 see box on lower left-hand side).

4. Claims 1, 13-18 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Roveti.

Referring to claim 1, Roveti discloses an electric circuit test device for testing an electric circuit, the test device being insertable in a receptacle, the receptacle including

electrical terminals coupled to the electrical circuit, the device comprising: a housing (fig. 1 (11)) characterized by a longitudinal axis; a plug blade (fig. 1 (12-14)) assembly disposed within the housing and configured to mate with the electrical terminals (fig. 1 (15-17)), electrical continuity being established between the plug blade assembly and the electric circuit (column 2, lines 45-49); a fault detection circuit (fig. 4) coupled to the plug blade assembly and disposed within the housing, the fault detection circuit being configured to detect a circuit status condition in the electrical circuit (column 4, lines 11-14); and at least one circuit status indicator assembly (fig. 4) coupled to the fault detection circuit and normal thereto, the at least one circuit status indicator assembly including a plurality of semiconductor light indicators (fig. 1 (23-25)) connected substantially normal to the at least one circuit status indicator assembly, the plurality of semiconductor light indicators being configured to emit a code corresponding to the circuit status condition in a direction normal to the longitudinal axis with a viewing angle less than approximately 30° (column 4, lines 8-11). It should be noted that since the semiconductor light indicators of Brownell are LED's (column 4, lines 67-68), their viewing angle would be less than 30°.

Referring to claims 13 and 24, Roveti discloses the device as claimed wherein the fault detection circuit is configured to detect the circuit status condition in a multi-phase center grounded electric circuit (column 4, lines 45-51).

Referring to claims 14 and 17, Roveti discloses the device as claimed wherein the circuit status condition includes an open hot wire condition (column 4, lines 56-62). It should be noted that if the hot wire were open, no lights would be illuminated.

Referring to claim 15, Roveti discloses the device as claimed wherein the circuit status condition includes an open ground status condition (column 4, lines 56-58).

Referring to claim 16, Roveti discloses the device as claimed wherein the circuit status condition includes a hot and ground reversed status condition (column 4, lines 48-61).

Referring to claim 18, Roveti discloses the device as claimed wherein the circuit status condition includes a properly wired and pounded status condition (column 4, lines 53-54).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 11, 12 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell in view of Kusko et al.

Referring to claim 11, Brownell discloses the device as claimed wherein the fault detection circuit includes a redundant ground current safety portion (column 12, lines 3-7).

Brownell does not disclose that the redundant ground current safety portion prevents ground current from exceeding 500 microamperes.

Kusko et al. discloses a fault detection circuit with a redundant ground current safety portion that prevents ground current from exceeding 500 microamperes (column 6, lines 19-21).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the current limitations of Kusko et al. into the device of Brownell for the purpose of specifying limitations whereby disclosing a safer circuit for protecting against ground current.

Referring to claim 12, Brownell discloses the device as claimed wherein the ground current safety portion includes a plurality of resistors in series (fig. 14 (R1-R3) and (R5-R7)).

Referring to claim 40, Brownell discloses the device as claimed, except wherein the fault detection circuit is configured to detect the circuit status condition in a multi-phase center grounded electric circuit.

Kusko et al. discloses the fault detection circuit is configured to detect the circuit status condition in a multi-phase center grounded electric circuit (column 17, lines 1-3).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the configuration of Kusko et al. into the device of Brownell for the purpose of being able to detect a wider variety of circuit configurations whereby making the device more universal.

7. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell in view of Brown.

Referring to claim 23, Brownell discloses the device as claimed except for an acoustic device configured to emit the circuit status condition.

Brown discloses a fault detector including an acoustic device configured to emit the circuit status condition (abstract).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the acoustic device of Brown into the device of Brownell for the purpose of providing additional indication of a fault condition whereby leading to a more reliable system.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brownell in view of Robitaille et al.

Referring to claim 26, Brownell discloses the device as claimed wherein the electric circuit includes a receptacle with second electrical terminals coupled to the electric circuit (column 11, lines 1-2).

Brownell does not disclose a second electric circuit test device coupled to the receptacle and the connector, electrical continuity being established between the receptacle and the connector configured to detect a circuit status condition in the electrical circuit.

Robitaille et al. discloses an electric circuit test device (fig. 3) coupled to the receptacle and the connector, electrical continuity being established between the receptacle and the connector configured to detect a circuit status condition in the electrical circuit (abstract).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the test circuit of Robitaille et al. into the device of Brownell for the purpose of including additional test circuitry whereby making it possible to detect the circuit status directly at the receptacle (abstract).

Allowable Subject Matter

9. Claims 22 and 28-32 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents are cited to show the state of the art with respect to circuit testers.

USPN 5,625,285 to Virgilio: This patent shows an apparatus for detecting miswiring and open connections in an AC outlet, using multiple, different colored LEDs.

USPN 5,109,200 to Dushane et al.: This patent shows an apparatus for testing an AC outlet using an RF transmitter and receiver.

Conclusion

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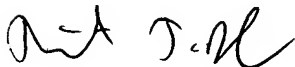
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Dole whose telephone number is (571) 272-2229.

The examiner can normally be reached on Mon. thru Fri. from 8:00 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on (571) 272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TJD



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